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Notice of Allowability	Application No.	Applicant(s)	
	10/656,195	ANDREEV ET AL.	
	Examiner	Art Unit	
	Sudhanshu C. Pathak	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to June 20th, 2007.
2. ☒ The allowed claim(s) is/are 1-2, 5-10, 13-16 & 18-20 and re-numbered as claims 1-15 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. Claims 1-2, 4-10, 13-16 & 18-20 are pending in the application.
2. Claims 3-4, 11-12 & 17 have been canceled.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David D. Brush on July 31st, 2007.

- The Claims have been amended as follows:
 - **Cancel Claim 4.**
 - In Claim 9, lines 6-7 **replace** "...for causing the to provide..."
with
"...for causing the computer to provide..."
 - In Claim 9, lines 11-12 **replace** "...fourth computer readable program code for causing the computer to output an output data stream containing a plurality of valid bits of the input signal at the desired output frequency; and..."
with

“...fourth computer readable program code for causing the computer to shift the valid signal by the predetermined number; and”.

- In Claim 9, lines 13-14 **replace** “...fifth computer readable program code for causing the computer to shift the valid signal by the predetermined number.”

with

“...fifth computer readable program code for causing the computer to output an output data stream containing a plurality of shifted valid bits of the input signal at the desired output frequency.”.

- In Claim 10, lines 1-2 **replace** “...wherein the fourth computer readable program code...”

with

“...wherein the fifth computer readable program code...”

- **Cancel Claim 12.**

- In Claim 15, lines 10-11 **replace** “...outputting an output data stream containing a plurality of the valid bits of the input signal at the desired output frequency.”

with

“...outputting an output data stream containing a plurality of the shifted valid bits of the input signal at the desired output frequency.”

Allowable Subject Matter

4. Claims 1-2, 5-10, 13-16 & 18-20 and re-numbered as claims 1-15 respectively are allowable over the prior art of record because the cited references do not contain the specified limitation of a circuit having: an input for receiving an input signal containing a plurality of bits at an input frequency and for receiving a representation of desired output frequency; a splitter, which splits the input signal into a plurality of split signals each at a frequency of the desired output frequency; a plurality of catchers, wherein each catcher provides bits of a respective split signal and a valid signal identifying bits of the respective split signal that are valid; a first shifter, which shifts valid bits of the respective split signal that are identified by at least some of the catchers by a predetermined number, and a second shifter, which shifts the valid signal identified by at least some of the catchers by the predetermined number; and an output responsive to the shifted valid bits to provide an output signal containing a plurality of valid bits of the input signal at the desired output frequency.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571)-272-3042.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sudhanshu C. Pathak
Examiner
Art Unit 2611



CHIEH M. FAN
SUPERVISORY PATENT EXAMINER